# NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The community map repository should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where Base Flood Elevations (BFEs) and/or floodways have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0' North American Vertical Datum (NAVD88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance

Certain areas not in Special Flood Hazard Areas may be protected by **flood** control structures. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures in this

The projection used in the preparation of this map was Universal Transverse Mercator zone 10. The horizontal datum was NAD 83, GRS 80 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov/ or contact the National Geodetic Survey at the following address:

NGS Information Services NOAA N/NGS12 National Geodetic Survey SSMC-3, #9202 1315 East-West Highway Silver Spring, MD 20910-3282

To obtain current elevation, description, and/or location information for bench marks shown on this map, please contact the Information Services Branch of the National Geodetic Survey at (301) 713-3242, or visit its website at http://www.ngs.noaa.gov/.

Base Map information shown on this FIRM was derived from multiple sources Dase map information shown on this Firth was derived from multiple sources. Base map files were provided in digital forms by the Metro Data Resources Center. This information was compiled from many local sources and includes transportation features, water features, political boundaries, and Public Land Survey System features.

This map reflects more detailed and up-to-date stream channel configurations than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables may reflect stream channel distances that differ from what is shown on this map.

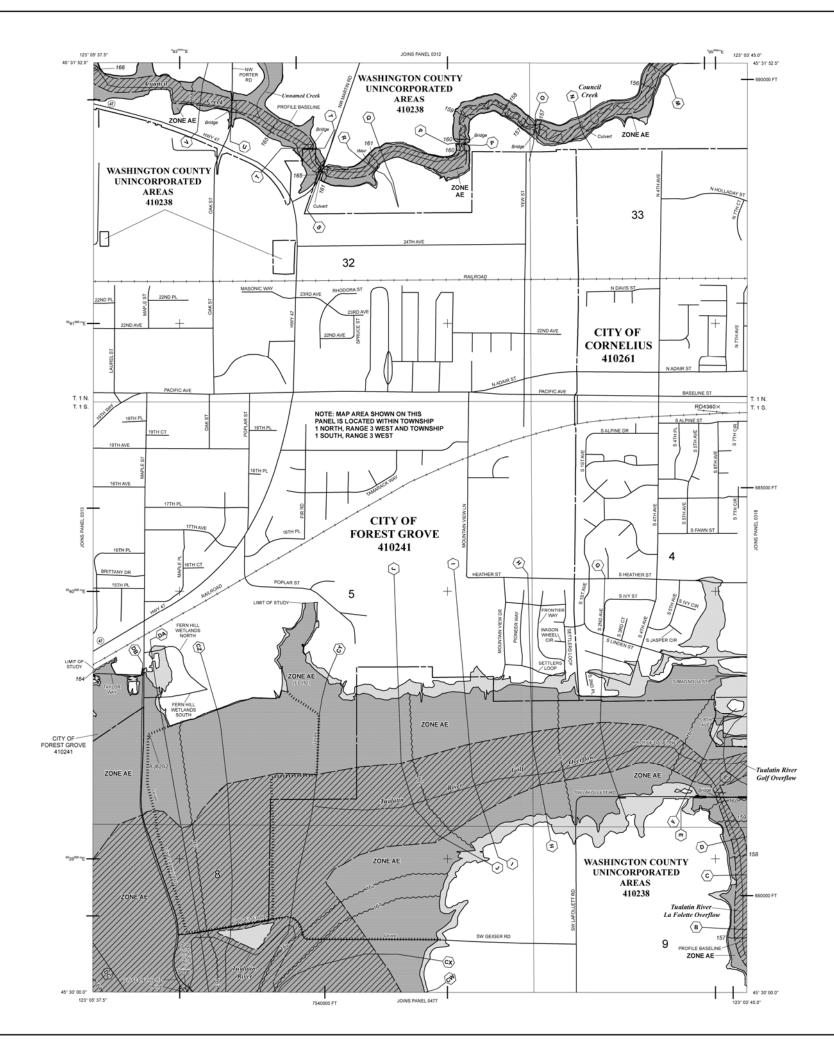
Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed Map Index for an overview map of the county showing the layout of map panels, community map repository address, and a Listing of Communities table containing National Pleod insurance Program dates for each community as well as a listing of the panels on which each community is located.

The **profile base lines** depicted on this map represent the hydraulic modeling base lines that match the flood profiles in the FIS report. As a result of improved topographic data, the **profile base line**, in some cases may deviate significantly from the channel centerline or appear outside the SFHA.

For information on available products associated with this FIRM visit the FEMA Flood Map Service Center (MSC) website at hittp://mscfema.gov. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the MSC website.

If you have **questions about this map**, how to order products or the National Flood Insurance Program in general, please call the FEMA Map Information exchange (FMI) at 1-817-FEMA-MAP (1-877-336-2627) or visit the FEMA website at <a href="http://www.fema.gov/business/nfip">http://www.fema.gov/business/nfip</a>.



SPECIAL FLOOD HAZARD AREAS (SFHAS) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD The 1% annual chance flood (100-year flood), also known as the base flood, in the flood that has a 1% chance of being equaled or exceeded in any given year. This Special Probod Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas or Special Flood Hazard include Zones A, AE, AM, AO, AR, A98, V, and VE The Base Flood Elevation is the water surface elevation of the 1% annual chance flood. No Base Flood Elevations determined. ZONE AE Base Flood Flevations determined. ZONE AH Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations ZONE AO Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined Area of special hazard formerly protected from the 1% annual chance flood event by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance of greater flood event. Areas to be protected from 1% annual chance flood event by a Federal flood protection system under construction; no Base Flood Elevations determined. ZONE V Coastal flood zone with velocity hazard (wave action); no Base Flood Elevation Coastal flood zone with velocity hazard (wave action); Base Flood Elevations FLOODWAY AREAS IN ZONE AE The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroschment so that the 1% annual chance flood can be carried without substantial increases in flood heights. OTHER FLOOD AREAS ZONE X OTHER AREAS Areas determined to be outside the 0.2% annual chance floodplain.

Areas in which flood hazards are undetermined, but possible. ZONE D COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS 115 OTHERWISE PROTECTED AREAS (OPAs) CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas. 1% annual chance floodplain boundary 0.2% annual chance floodplain boundary — Floodway boundary CBRS and OPA boundary Boundary dividing Special Flood Hazard Area Zones, and boundary dividing Special Flood Hazard Areas of different Base Flood Dievetions, flood depths or flood velocities. 513 Sase Flood Elevation line and value: elevation in feet Base Flood Elevation value where uniform within zone; elevation in feet\* (EL 978) an Vertical Datum of 1988 Cross section line 23)-----(23) Transect line 97"10"30.5",32"10"30.5" Geographic coordinates referenced to North American Datum of 1983 (NAD 83) 4276000mE 1000-meter Universal Transverse Mercator grid values, zone 10 600000 FT 5000-foot grid ticks: Oregon State Plane coordinate system, North zone (FIPSZONE 3601), Lambert Conformal Conic projection Bench mark (see explanation in Notes to Users section of this FIRM panel) MG5510 •M1.5 Aqueduct, Culvert, Flume, Penstock, or Storm Sewer Road or Railroad Bridge EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP November 4, 2016

> PANEL 0314E **FIRM** FLOOD INSURANCE RATE MAP WASHINGTON COUNTY, OREGON AND INCORPORATED AREAS PANEL 314 OF 650 (SEE MAP INDEX FOR FIRM PANEL LAYOUT) COMMUNITY WASHINGTON COUNTY 410238 0314 E

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

MAP SCALE 1" = 500" 250 0 500 1000 FEET

150



MAP NUMBER 41067C0314E **EFFECTIVE DATE** NOVEMBER 4, 2016

NUMBER PANEL SUFFIX

METERS 300

# NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The community map repository should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where Base Flood Elevations (BFEs) and/or floodways have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0' North American Vertical Datum (NAVD88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Sillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Sillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this iunsfelicity.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures in this invisidiction.

The projection used in the preparation of this map was Universal Transverse Mercator zone 10. The horizontal datum was NAD 83, GRS 80 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1938, visit the National Geodetic Survey website at http://www.ngs.noaa.gov/ or contact the National Geodetic Survey at the following address:

NGS Information Services NOAA NINGS12 National Geodetic Survey SSMC-3, #9202 1315 East-West Highway Silver Spring, MD 20910-3282

To obtain current elevation, description, and/or location information for bench marks shown on this map, please contact the Information Services Branch of the National Geodetic Survey at (301) 713-3242, or visit its website at http://www.ngs.noaa.gov/.

Base Map information shown on this FIRM was derived from multiple sources. Base map files were provided in digital format by the Metro Data Resources Center. This information was compiled from many local sources and includes transportation features, water features, political boundaries, and Public Land Survey System features.

This map reflects more detailed and up-to-date stream channel configurations than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables may reflect stream channel distances that differ from what is shown on this map.

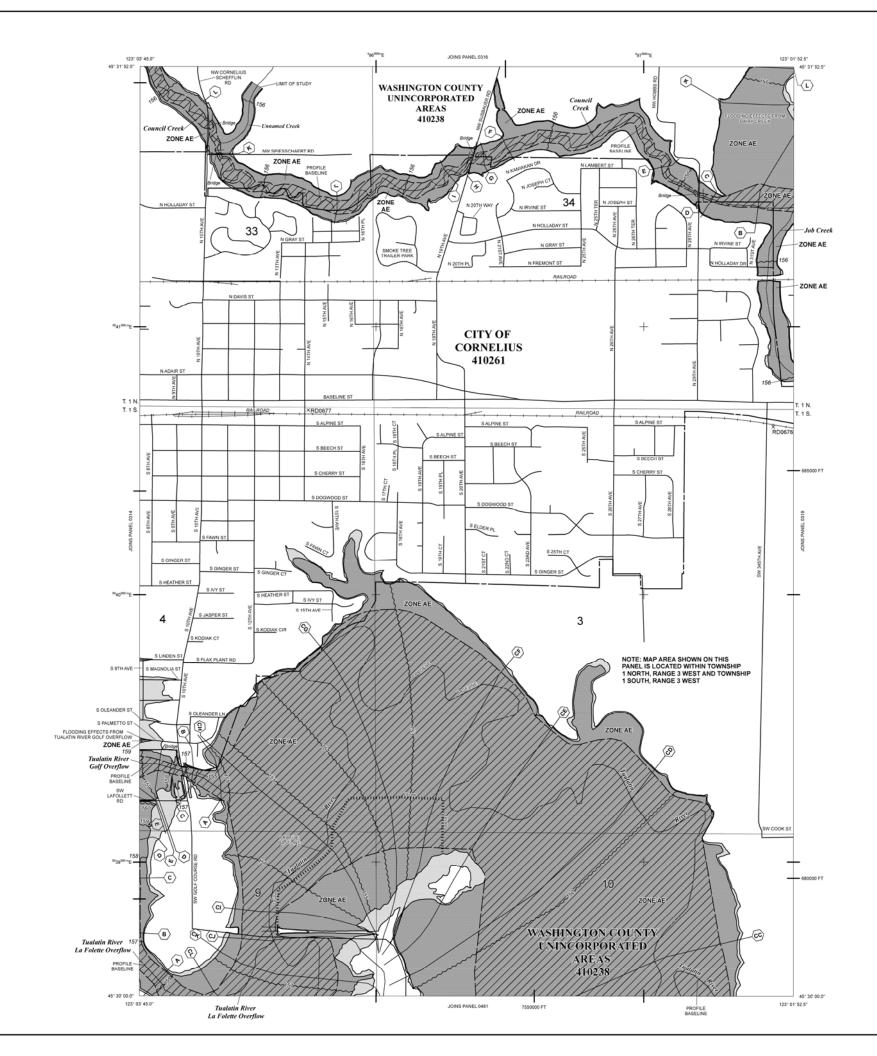
Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

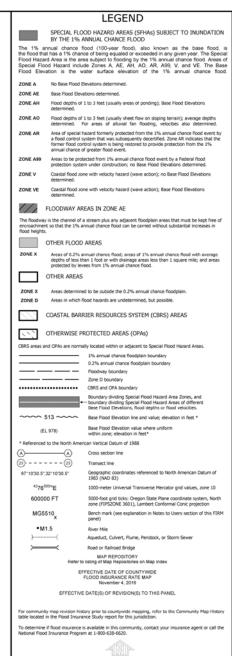
Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood insurance Program dates for each community as well as a listing of the panels on which each community is located.

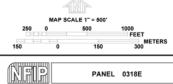
The **profile base lines** depicted on this map represent the hydraulic modeling base lines that match the flood profiles in the FIS report. As a result of improved topographic data, the **profile base line**, in some cases may deviate significantly from the channel centerline or appear outside the SFHA.

For information on available products associated with this FIRM visit the FEMA Flood Map Service Center (MSC) website at http://msc.fema.gov. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the MSC website.

If you have questions about this map, how to order products or the National Flood Insurance Program in general, please call the FEMA Map Information eXchange (FMIX) at 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA website at <a href="http://www.fema.gov/business/nfip">http://www.fema.gov/business/nfip</a>.







FIRM
FLOOD INSURANCE RATE MAP
WASHINGTON COUNTY,
OREGON
AND INCORPORATED AREAS

PANEL 318 OF 650
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)
CONTAINS:
COMMANNEY
NAMBER PANEL SUFFIX
CONTACUAL, CITY OF 41028 018 E

otice to User. The Map Number shown below should be used hen placing map orders; the Community Number shown bove should be used on insurance applications for the subject community.



MAP NUMBER 41067C0318E EFFECTIVE DATE NOVEMBER 4, 2016

# NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The community map repository should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where Base Flood Elevations (BFEs) and/or floodways have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0' North American Vertical Datum (NAVD88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance

Certain areas not in Special Flood Hazard Areas may be protected by **flood** control structures. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures in this

The projection used in the preparation of this map was Universal Transverse Mercator zone 10. The horizontal datum was NAD 83, GRS 80 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov/ or contact the National Geodetic Survey at the following address:

NGS Information Services NOAA N/NGS12 National Geodetic Survey SSMC-3, #9202 1315 East-West Highway Silver Spring, MD 20910-3282

To obtain current elevation, description, and/or location information for bench marks shown on this map, please contact the Information Services Branch of the National Geodetic Survey at (301) 713-3242, or visit its website at http://www.ngs.noaa.gov/.

Base Map information shown on this FIRM was derived from multiple sources Dase map information shown on this Firth was derived from multiple sources. Base map files were provided in digital forms by the Metro Data Resources Center. This information was compiled from many local sources and includes transportation features, water features, political boundaries, and Public Land Survey System features.

This map reflects more detailed and up-to-date stream channel configurations than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables may reflect stream channel distances that differ from what is shown on this map.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood insurance Program dates for each community as well as a listing of the panels on which each community is located.

The **profile base lines** depicted on this map represent the hydraulic modeling base lines that match the flood profiles in the FIS report. As a result of improved topographic data, the **profile base line**, in some cases may deviate significantly from the channel centerline or appear outside the SFHA.

For information on available products associated with this FIRM visit the FEMA Flood Map Service Center (MSC) website at http://msc.fema.gov. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the MSC website.

If you have **questions about this map**, how to order products or the National Flood Insurance Program in general, please call the FEMA Map Information exchange (FMI) at 1-817-FEMA-MAP (1-877-336-2627) or visit the FEMA website at <a href="http://www.fema.gov/business/nfip">http://www.fema.gov/business/nfip</a>.



SPECIAL FLOOD HAZARD AREAS (SFHAS) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD The 1% annual chance flood (100-year flood), also known as the base flood, in the flood that has a 1% chance of being equaled or exceeded in any given year. This Special Probod Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas or Special Flood Hazard include Zones A, AE, AM, AO, AR, A98, V, and VE The Base Flood Elevation is the water surface elevation of the 1% annual chance flood. No Base Flood Elevations determined.

Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations

ZONE AO Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined Area of special hazard formerly protected from the 1% annual chance flood event by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance of greater flood event. Areas to be protected from 1% annual chance flood event by a Federal flood protection system under construction; no Base Flood Elevations determined. ZONE V Coastal flood zone with velocity hazard (wave action); no Base Flood Elevation Coastal flood zone with velocity hazard (wave action); Base Flood Elevations FLOODWAY AREAS IN ZONE AE

ZONE AE Base Flood Elevations determined.

ZONE AH

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroschment so that the 1% annual chance flood can be carried without substantial increases in flood heights. OTHER FLOOD AREAS

ZONE X

OTHER AREAS

Areas determined to be outside the 0.2% annual chance floodplain.

Areas in which flood hazards are undetermined, but possible. ZONE D

115 OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

1% annual chance floodplain boundary 0.2% annual chance floodplain boundary — Floodway boundary

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

CBRS and OPA boundary Boundary dividing Special Flood Hazard Area Zones, and boundary dividing Special Flood Hazard Areas of different Base Flood Dievetions, flood depths or flood velocities.

513 Sase Flood Elevation line and value: elevation in feet

Base Flood Elevation value where uniform within zone; elevation in feet\* (EL 978)

Cross section line 3)-----(23) Transect line

97"10"30.5",32"10"30.5" Geographic coordinates referenced to North American Datum of 1983 (NAD 83) 4276000mE 1000-meter Universal Transverse Mercator grid values, zone 10

600000 FT 5000-foot grid ticks: Oregon State Plane coordinate system, North zone (FIPSZONE 3601), Lambert Conformal Conic projection Bench mark (see explanation in Notes to Users section of this FIRM panel) MG5510

•M1.5 Aqueduct, Culvert, Flume, Penstock, or Storm Sewer Road or Railroad Bridge

MAP REPOSITORY Refer to listing of Map Repositories on Map Index EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP November 4, 2016

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

MAP SCALE 1" = 500" 250 0 500 1000 FEET METERS 300 150

**FIRM** 

PANEL 0319E

FLOOD INSURANCE RATE MAP WASHINGTON COUNTY, OREGON AND INCORPORATED AREAS

PANEL 319 OF 650

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

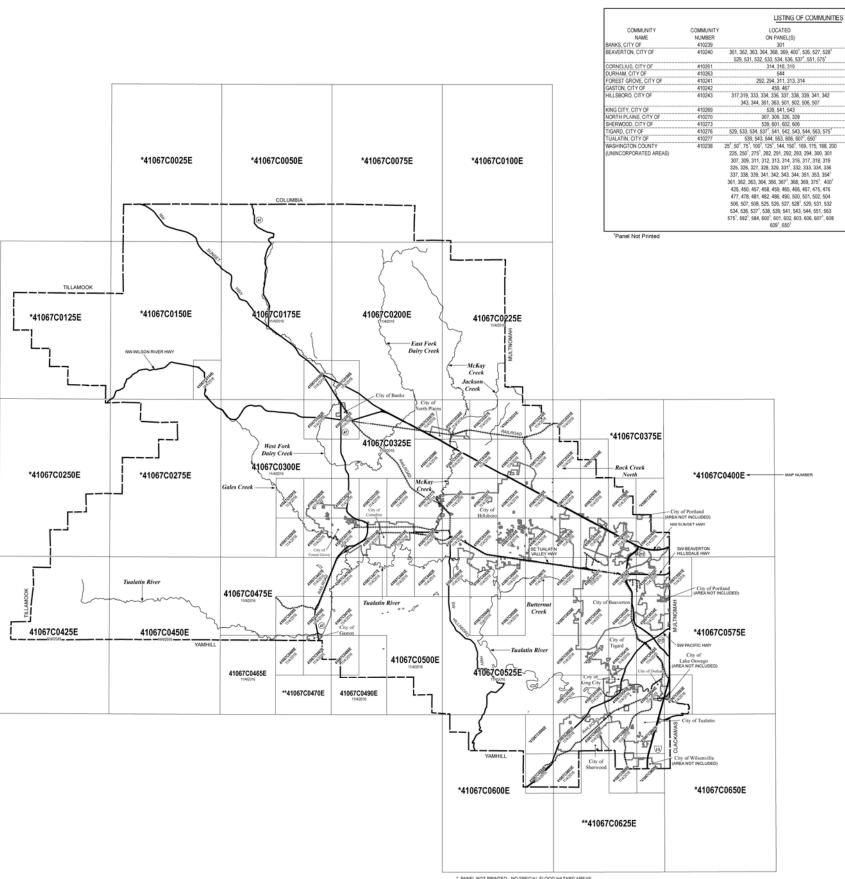
COMMUNITY

NUMBER PANEL SUFFIX

HILLSBORO, CITY OF 410243 0319



MAP NUMBER 41067C0319E **EFFECTIVE DATE** NOVEMBER 4, 2016



\* PANEL NOT PRINTED - NO SPECIAL FLOOD HAZARD AREAS
\*\* PANEL NOT PRINTED - AREA OUTSIDE COUNTY BOUNDARY

# MAP DATES

INITIAL NEIP

MAP DATE

INITIAL FIRM

DATE November 4, 2016 September 28, 1984

MOST RECENT

FIRM PANEL DAT

November 4, 2016 November 4, 2016

This FIRM Index displays the map date for each FIRM panel at the time that this Index was printed. Because this index may not be distributed to unaffected communities in subsequent revisions, users may determine the current map date for each FIRM panel by visiting the FEMA Map Service Center (MSC) website at

Communities annexing land on adjacent FIRM panels must obtain a current copy of the adjacent panel as well as the current FIRM Index. These may be ordered directly from the Map Service Center at the number listed above.

### NOTE TO USERS

Future revisions to this FIRM Index will only be issued to communities that are located on FIRM panels being revised. This FIRM Index therefore remains valid for FIRM panels dated November 4, 2016 or earlier. Please refer to the 4MOST RECENT FIRM PANEL DAYE: column in the <u>Listing of Communities</u> table to determine the most recent FIRM index date for each

#### ELEVATION DATUM

### BASE MAP SOURCE

# MAP REPOSITORIES

BANKS, CITY OF City Administrative Offices 13680 Northwest Main Street Banks, Oregon 97106

BEAVERTON, CITY OF Community Development Department 4755 Southwest Griffith Drive Beaverton, Oregon 97005

CORNELIUS, CITY OF Planning Department 1300 South Kodiak Circle Cornelius, Oregon 97113

DURHAM, CITY OF

City Hall 17160 Southwest Upper Boones Ferry Road Durham, Oregon 97224

FOREST GROVE, CITY OF City Hall 1924 Council Street Forest Grove, Oregon 97116

GASTON, CITY OF City Hall 116 Front Street Gaston, Oregon 97119

HILLSBORO, CITY OF

City Hall 150 East Main Street Hillsboro, Oregon 97123

KING CITY, CITY OF City Hall 15300 Southwest 116<sup>th</sup> Avenue King City, Oregon 97224

NORTH PLAINS, CITY OF City Hall 31360 Northwest Commercial Street North Plains, Oregon 97133

SHERWOOD, CITY OF City Hall 22560 Southwest Pine Street Sherwood, Oregon 97140

TIGARD, CITY OF City Hall 13125 Southwest Hall Boulevard Tigard, Oregon 97223

TUALATIN, CITY OF City Hall 18880 Southwest Martinazzi Avenue Tualatin, Oregon 97062

WASHINGTON COUNTY (Unincorportated Areas)
County Public Services Building
155 North First Avenue Suite 350 Hillsboro, Oregon 97124



PROGRAM

MAP INDEX

**FIRM** FLOOD INSURANCE RATE MAP WASHINGTON COUNTY, OREGON

AND INCORPORATED AREAS

(SEE LISTING OF COMMUNITIES TABLE)

# **MAP INDEX**



MAP NUMBER 41067CIND0A EFFECTIVE DATE NOVEMBER 4, 2016